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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,765	12/29/2000	Robert A. Wiedeman	900.0020USU	5071

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EXAMINER

SMITH, SHEILA B

ART UNIT	PAPER NUMBER
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2681

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DATE MAILED: 10/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/751,765

Applicant(s)

WIEDEMAN ET AL.

Examiner

Sheila B. Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26 is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The references listed in the Information Disclosure Statements submitted on 06/13/01 have been considered by the examiner (see attached PTO-1449).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-12, and 19-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao et al. (U.S. Patent Number 6,332,069) in view of Maeda et al. (U.S. Patent Number 6,352,222).

Regarding *claim 1*, Zhao et al. discloses essentially all the claimed invention as set forth in the instant application, further Zhao et al. discloses a apparatus and method for grouping carriers to minimize the occurrence of call blocking in a satellite-based communications network. In addition Zhao et al. discloses a method for operating a mobile satellite communication system having at least one gateway (124), at least one user terminal (134), comprising steps of: for a site to be protected from UT transmissions, specifying an exclusion zone having a confidence limit (which reads on service a particular zone of coverage of the spot beam, so that signal burst can be transmitted more efficiently over the carriers between the satellite and access terminals, as disclosed in column 4 lines 40-45) associated therewith; and selectively providing service to a (134) depending on a determined location of the

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UT relative to the exclusion zone (which reads on this spot beam coverage area is segregated into three offset zones, as disclosed in column 15 lines 13-17) and on an estimated error (E) of the determined UT location (which reads on with 15 degree beam elevation angle, 5.3 degree satellite inclination angle and 50% beam coverage extension (due to beam pointing error and mobile terminal beam selection error) , as disclosed in column 15 lines 9-11). However, Zhao et al. fails to specifically discloses the use of a constellation of satellites.

In the same field of endeavor, Maeda et al. discloses satellite, satellite control method and satellite communication system. In addition Maeda et al. discloses the use of a constellation of satellites as exhibited in figure 12 disclosed in column 18 lines 31-53.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Zhao et al. by modifying the a position location system with a constellation of satellites as taught by Maeda et al. for the purpose of controlling the trajectory by using the parameters.

Regarding claims 2,6,8,9, Zhao et al. discloses everything claimed as applied above (*see claim 1*) however, Zhao et al. fails to specifically discloses the use of the exclusion zone is specified to comprise at least one of a polygon that defines an area, a volume, or a surface.

In the same field of endeavor, Maeda et al. discloses an satellite, satellite control method and satellite communication system. In addition Maeda et al. discloses the use of a the exclusion zone is specified to comprise at least one of a polygon that defines an area, a volume, or a surface (which reads on this as to form such a polygon that includes all the service areas, as disclosed in column 10 lines 37-39).

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Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Zhao et al. by modifying the a position location system with the exclusion zone is specified to comprise at least one of a polygon that defines an area, a volume, or a surface as taught by Maeda et al. for the purpose of setting the initial value for the orbital inclination angle.

Regarding claims 3-5, Zhao et al. discloses everything claimed as applied above (see claim 1), in addition Zhao et al. discloses a location of the UT (134) is determined by the UT (134), and transmitted to the GW (124) as disclosed in column 8 lines 55-65.

Regarding claim 7, Zhao et al. discloses everything claimed as applied above (see claim 1), in addition Zhao et al. discloses the UT (134) is granted service if the value of E is less than CL as disclosed in column 1 lines 27-36.

Regarding claim 10, Zhao et al. discloses everything claimed as applied above (see claim 1), in addition Zhao et al. discloses the exclusion zone is specified to comprise a surface defined by at least two connected points on the surface of the earth and at least point located above the surface of the earth as disclosed in column 1 lines 27-36.

Regarding claims 11-12, Zhao et al. discloses everything claimed as applied above (see claim 1), in addition Zhao et al. discloses boundaries of the exclusion zone are static as disclosed in column 1 lines 27-36.

Regarding claims 19-25, Zhao et al. discloses everything claimed as applied above (see claim 1), in addition Zhao et al. discloses wherein there are overlapping exclusion zones specified, each having a different value of CL as disclosed in column 1 lines 27-36.

3. Claims 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao et al. in view of Maeda et al. and further in view of Ishikawa et al. (U.S. Patent Number 6,332,069).

Regarding claims 13-18, Zhao et al. in view of Maeda et al. discloses everything claimed as applied above (*see claim 1*) however, Zhao et al. in view of Maeda et al. fails to specifically disclose the use of the value of E is a function of the accuracy of the UT local oscillator, and where information that specifies the accuracy of the UT local oscillator is stored in the UT.

In the same field of endeavor, Ishikawa et al. discloses an method for determining position of mobile earth station in satellite communication system. In addition Ishikawa et al. discloses the use of the value of E is a function of the accuracy of the UT local oscillator, and where information that specifies the accuracy of the UT local oscillator is stored in the GW (which reads on t is possible to perform high accuracy position determination by estimating and compensating for the timing error arising from instability in the accuracy of the clock of the mobile earth station and the frequency error resulting from instability of the frequency oscillator of the mobile earth station, as disclosed in column 6 lines 10-20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Zhao et al. by modifying the a position location system with the use of the value of E is a function of the accuracy of the UT local oscillator, and where

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information that specifies the accuracy of the UT local oscillator is stored in the UT as taught by Ishikawa et al. for the purpose of determine the estimated position of the mobile earth station relative to its true position.

Allowable Subject Matter

4. Claim 26 is allowed.

5. The following is an examiner's statement of reasons for allowance:

Regarding claim 26, The prior art of record considered alone or in combination neither anticipates nor renders obvious A mobile satellite communication system comprising at least one gateway, at least one user terminal, and a constellation of satellites, said GW comprising a controller for controlling operations of said UT and further comprising an interface to at least one of the Public Switched Telephone Network (PSTN) or to the Internet, said GW storing a database containing at least one of a Confidence Polygon, a Confidence Volume, or a Confidence Surface to establish a geometric shape located on the earth, above the earth or in space, or combinations thereof, said GW further storing a static or a variable Confidence value that is compared to a value of an error (E) in a position location of the UT, said controller acting upon the database and assigned or derived values of CL and E, to determine if a comparison of CL and E, combined with a current position of the UT, yields a certain result according to the operational mode of the GW controller, wherein depending on the operational mode of the GW the result of the comparison affects control of the UT or an external device attached to the UT, whereby the UT is forbidden or allowed to access the mobile satellite system or to make or receive a call, or depending on the operational mode of the GW the result of the comparison

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affects some operational characteristic of the UT to provide an ability to protect a site from UT emissions.

The prior art of record provided numerous teachings of methods for call blocking in a satellite based network. However, the prior art of record failed to specifically disclose to determine if a comparison of CL and E, combined with a current position of the UT, yields a certain result according to the operational mode of the GW controller, wherein depending on the operational mode of the GW the result of the comparison affects control of the UT or an external device attached to the UT, whereby the UT is forbidden or allowed to access the mobile satellite system or to make or receive a call, or depending on the operational mode of the GW the result of the comparison affects some operational characteristic of the UT to provide an ability to protect a site from UT emissions

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheila B. Smith whose telephone number is (703)305-0104. The examiner can normally be reached on Monday-Thursday 6:00 am - 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 703-305-4040. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-0104.

S. Smith
September 27, 2003


SINH TRAN
PRIMARY EXAMINER